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10/642,635	08/19/2003	Kang Soo Seo	1740-000024/US	3779
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HARNES, DICKY & PIERCE, P.L.C. P.O. BOX 8910 RESTON, VA 20195			EXAMINER CHIO, TAT CHI	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/642,635	<b>Applicant(s)</b> SEO ET AL.	
	<b>Examiner</b> Tat Chi Chio	<b>Art Unit</b> 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 October 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,5 and 7-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5 and 7-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                                            |                                                                                         |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed 10/4/2007 have been fully considered but they are not persuasive.

Applicant argues that a "computer readable medium having a data structure for managing reproduction of at least multiple reproduction path video data" as recited in independent claim 1 stores functional descriptive material.

In response, the examiner respectfully disagrees. When nonfunctional descriptive material is recorded on some computer-readable medium, in a computer or on an electromagnetic carrier signal, it is not statutory since no requisite functionality is present to satisfy the practical application requirement. Merely claiming nonfunctional descriptive material, i.e., abstract ideas, stored on a computer-readable medium, in a computer, or on an electromagnetic carrier signal, does not make it statutory. Therefore, the rejection under 35 U.S.C. 101 is maintained.

Applicant argues that Sawabe fails to disclose "a management area storing management information for managing reproduction of the multiple reproduction path video data, the management information including at least one entry point map associated with each reproduction path, each entry point map identifying the entry points in the video data for the associated reproduction path".

In response, the examiner respectfully disagrees. Figure 6 and Figure 7 show management information for managing reproduction of the multiple reproduction path

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video data, and Figure 7 shows the entry point map, which is associated with each reproduction path and identifies the entry points in the video data for the associated reproduction path.

***Claim Rejections - 35 USC § 101***

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1, 2, 4, 5 and 7-19 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Nonfunctional descriptive material that does not constitute a statutory process, machine, manufacture, or composition of matter and should be rejected under 35 U.S.C. 101. Certain types of descriptive material, such as music, literature, art, photographs, and mere arrangements or compilations of facts or data, without any functional interrelationship is not a process, machine, manufacture, or composition of matter. USPTO personnel should be prudent in applying the foregoing guidance. Nonfunctional descriptive material may be claimed in combination with other functional descriptive multi-media material on a computer-readable medium to provide the necessary functional and structural interrelationship to satisfy the requirements of 35 U.S.C. 101. The presence of the claimed nonfunctional descriptive material is not necessarily determinative of nonstatutory subject matter. For example, a computer that recognizes a particular grouping or sequence of musical notes read from memory and thereafter causes another defined series of notes to be played, requires a functional interrelationship among that data and the computing processes performed when utilizing that data. As such, a claim to that computer is statutory subject matter because it implements a statutory process.

Claims 1, 2, 4, 5 and 7-19 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claims 1, 2, 4, 5 and 7-19 recite a computer readable medium which does not impart functionality to a computer or computing device, and is thus considered nonfunctional descriptive material. Such nonfunctional descriptive material, in the absence of a functional interrelationship with a computer, does not constitute a statutory process, machine, manufacture or composition of matter and is thus non-statutory per se.

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 4, 7-15, 17, 18, 20-23, 26, and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Sawabe et al. (6,031,962).

**Consider claim 1,** Sawabe et al. teach a computer readable medium having a data structure for managing reproduction of at least multiple reproduction path video data recorded on the computer readable medium, comprising: a data area storing at least a portion of the multiple reproduction path video data (Fig. 5), the multiple reproduction path video data divided into one or more interleaving units (Fig. 6), each interleaving unit associated with one of the reproduction paths (Fig. 6), each interleaving unit starting and ending with a reproduction path change point (Fig. 6), the interleaving units associated with different reproduction paths being interleaved in the data area (Fig. 7), and the video data in each interleaving unit being divided into one or more entry points (Fig. 7); and a management area storing management information for managing reproduction of the multiple reproduction path video data, the management information including at least one entry point map associated with each reproduction path, each entry point map identifying the entry points in the video data for the associated reproduction path (Fig. 6 and Fig. 7).

**Consider claims 2, 28, and 29**, Sawabe et al. teach the computer readable medium, wherein the multiple reproduction path video data is divided into a plurality of clip files (Fig. 6), each clip file including video data associated with one of the multiple reproduction paths (Fig. 6), and each clip file divided into one or more of the interleaving units (Fig. 6).

**Consider claims 4, 24, and 26**, Sawabe et al. teach the computer readable medium, wherein each interleaved unit in at least one clip file includes a same number of entry points (Fig. 7).

**Consider claim 7**, Sawabe et al. teach the computer readable medium, wherein each entry point map indicates which of the identified entry points is a last entry point in an interleaved unit (Fig. 6 and Fig. 7).

**Consider claim 8**, Sawabe et al. teach the computer readable medium, wherein each entry point map indicates which of the identified entry points is a first entry point in an interleaved unit (Fig. 6 and Fig. 7).

**Consider claim 9**, Sawabe et al. teach the computer readable medium, wherein the entry point maps are aligned in time (Fig. 6 and Fig. 7).

**Consider claim 10**, Sawabe et al. teach the computer readable medium, further comprising: the management information includes an information file associated with each clip file, each information file including the at least one entry point map for the associated clip file, each entry point map identifying entry points in the clip file (Fig. 6 and Fig. 7).

**Consider claim 11**, Sawabe et al. teach the computer readable medium, wherein each entry point map indicates which of the identified entry points is a last entry point in an interleaved unit (Fig. 6 and Fig. 7).

**Consider claim 12**, Sawabe et al. teach the computer readable medium, wherein each entry point map indicates which of the identified entry points is a first entry point in an interleaved unit (Fig. 6 and Fig. 7).

**Consider claim 13**, Sawabe et al. teach the computer readable medium, wherein the entry point maps are aligned in time (Fig. 6 and Fig. 7).

**Consider claim 14**, Sawabe et al. teach a computer readable medium having a data structure for managing reproduction of at least multiple reproduction path video data recorded on the computer readable medium, comprising: a data area storing a plurality of clip files (Fig. 6), each clip file including video data associated with one of the multiple reproduction paths (Fig. 6), each clip file divided into entry points of video data (Fig. 7), the entry points in each clip file being grouped into one or more interleaving units (Fig. 7), and the plurality of clip files being interleaved in the data area on a interleaving unit basis (Fig. 7); and a management area storing management information for managing reproduction of the multiple reproduction path video data, the management information including at least one entry point map associated with each reproduction path, each entry point map identifying the entry points in the video data for the associated reproduction path (Fig. 6 and Fig. 7).

**Consider claim 15**, Sawabe et al. teach the computer readable medium, wherein each interleaved unit in at least one clip file includes a same number of entry points (Fig. 7).

**Consider claim 17**, Sawabe et al. teach a computer readable medium having a data structure for managing reproduction of at least multiple reproduction path video data recorded on the recording medium, comprising: a data area storing at least a portion of the multiple reproduction path video data (Fig. 6), the multiple reproduction path video data divided into one or more interleaving units (Fig. 6), each interleaving unit associated with one of the reproduction paths (Fig. 6), each interleaving unit being formed of a number of entry points (Fig. 7), and the interleaving units associated with different reproduction paths being interleaved in the data area (Fig. 7); a management area storing management information for managing reproduction of the multiple reproduction path video data, the management information including at least one entry point map associated with each reproduction path, each entry point map identifying the entry points in the video data for the associated reproduction path (Fig. 6 and Fig. 7).

**Consider claim 18**, Sawabe et al. teach the computer readable medium, wherein the number of entry points is fixed for at least interleaving units associated with a same reproduction path (Fig. 7).

**Consider claim 20**, Sawabe et al. teach a method of recording (Fig. 11) a data structure for managing reproduction of at least multiple reproduction path video data on a recording medium, comprising: recording at least a portion of the multiple reproduction



path video data in a data area of the recording medium (Fig. 6), the multiple reproduction path video data divided into one or more interleaving units (Fig. 6), each interleaving unit associated with one of the reproduction paths (Fig. 6), each interleaving unit starting and ending with a reproduction path change point (Fig. 6), the interleaving units associated with different reproduction paths being interleaved in the data area (Fig. 7), and the video data in each interleaving unit being divided into one or more entry points (Fig. 7); and a management area storing management information for managing reproduction of the multiple reproduction path video data, the management information including at least one entry point map associated with each reproduction path, each entry point map identifying the entry points in the video data for the associated reproduction path (Fig. 6 and Fig. 7).

**Consider claim 21,** Sawabe et al. teach a method of reproducing (Fig. 12) a data structure for managing reproduction of at least multiple reproduction path video data recorded on a recording medium, comprising: reproducing at least a portion of the multiple reproduction path video data from a data area of the recording medium (Fig. 6), the multiple reproduction path video data divided into one or more interleaving units (Fig. 6), each interleaving unit associated with one of the reproduction paths (Fig. 6), each interleaving unit starting and ending with a reproduction path change point (Fig. 6 and Fig. 7), the interleaving units associated with different reproduction paths being interleaved in the data area (Fig. 7), and the video data in each interleaving unit being divided into one or more entry points (Fig. 7); and a management area storing

management information for managing reproduction of the multiple reproduction path video data, the management information including at least one entry point map associated with each reproduction path, each entry point map identifying the entry points in the video data for the associated reproduction path (Fig. 6 and Fig. 7).

**Consider claim 22,** Sawabe et al. teach an apparatus for recording a data structure for managing reproduction of at least multiple reproduction path video data on a recording medium, comprising: an optical recording device to record data on the recording medium (101, 102, and 103 of Fig. 12); an encoder configured to control at least multiple reproduction path video data (72 of Fig. 11); and a controller configured to control to record the encoded multiple reproduction path video data on the recording medium (75 of Fig. 11), the controller for controlling the driver to record at least a portion of the multiple reproduction path video data in a data area of the recording medium (75 of Fig. 11), the multiple reproduction path video data divided into one or more interleaving units (Fig. 6), each interleaving unit associated with one of the reproduction paths (Fig. 6), each interleaving unit starting and ending with a reproduction path change point (Fig. 6 and Fig. 7), and the interleaving units associated with different reproduction paths being interleaved in the data area (Fig. 7), the video data in each interleaving unit being divided into one or more entry points (Fig. 7), and the controller configured to control the optical recording device to record management information for reproduction of the multiple reproduction path video data in a management area of the recording medium, the management information including at

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least one entry point map associated with each reproduction path, each entry point map identifying the entry points in the video data for the associated reproduction path (Fig. 6 and Fig. 7).

**Consider claim 23**, Sawabe et al. teach an apparatus for reproducing a data structure for managing reproduction of at least multiple reproduction path video data recorded on a recording medium, comprising: an optical reproducing device configured to reproduce data recorded on the recording medium (101, 102, and 103 of Fig. 12); a controller configured to control the optical reproducing device to reproduce at least a portion of the multiple reproduction path video data from a data area of the recording medium (100 of Fig. 12), the multiple reproduction path video data divided into one or more interleaving units (Fig. 6), each interleaving unit associated with one of the reproduction paths (Fig. 6), each interleaving unit starting and ending with a reproduction path change point (Fig. 6 and Fig. 7), and the interleaving units associated with different reproduction paths being interleaved in the data area (Fig. 7), the video data in each interleaving unit being divided into one or more entry points (Fig. 7), and the controller configured to control the optical recording device to record management information for reproduction of the multiple reproduction path video data in a management area of the recording medium, the management information including at least one entry point map associated with each reproduction path, each entry point map identifying the entry points in the video data for the associated reproduction path (Fig. 6 and Fig. 7).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5, 16, 19, 25, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sawabe et al. (6,031,962) in view of Sugimoto et al. (US 6, 470,140 B1).

**Consider claims 5, 25, and 27**, Sawabe et al. teach all the limitations in claims 1 and 3 but fails to explicitly teach the computer readable medium, wherein at least two interleaved units in at least one clip file have a different number of entry points.

Sugimoto et al. teach the recording medium, wherein at least two interleaved units in at least one clip file have a different number of entry points (Fig. 44). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate different number of entry points to efficiently utilize the random access capability of disc media.

**Consider claim 16**, Sugimoto et al. teach the computer readable medium, wherein at least two interleaved units in at least one clip file have a different number of entry points (Fig. 44).

**Consider claim 19**, Sugimoto et al. teach the computer readable medium, wherein the number of entry points varies for at least interleaving units associated with a same reproduction path (Fig. 44).

***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

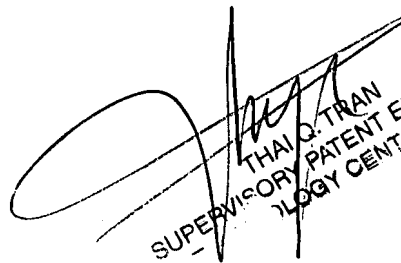
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tat Chi Chio whose telephone number is (571) 272-9563. The examiner can normally be reached on Monday - Thursday 8:30 AM-6:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thai Tran can be reached on (571)-272-7382. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TCC

  
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